

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/675,852 )  
In re application of: HEARD, Jacqueline, E. *et al.* )  
Filed: 09/30/2003 )  
Art Unit: 1638 )  
Examiner: KRUSE, David H. )  
Docket No. MBI-0022CIP )  
Customer No. 47550 )

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 CFR 1.131 OF LUC ADAM**

I, Luc Adam, declare:

1. I received my Bachelor's degree and Ph.D. from Laval University, Ville de Québec (Québec) Canada. I was a post-doctoral fellow at both the NRC Plant Biotechnology Institute in Saskatoon, Saskatchewan and then at the Carnegie Institution of Washington, Department of Plant Biology, at Stanford University. I joined Mendel Biotechnology, Inc. in 1997 where I was a Project Lead in screening large collection of T-DNA mutagenized plants until about 2001. In this declaration, I serve as an expert witness in that my work has involved the isolation and characterization of mutants in genes regulating important polygenic traits related to developmental biology, as well as in biotic or abiotic stress responses in plants. This declaration is being drafted as part of my normal duties to support research and intellectual property at Mendel Biotechnology, Inc. As compensation for employment at Mendel Biotechnology, Inc., I receive salary, benefits and stock options.
2. I understand this application pertains to transgenic plants transformed with G482, SEQ ID NOs: 3 and 4, and related sequences. I also understand that the methods include using the claimed polynucleotides and polypeptides to produce a transgenic plant having an altered trait, including greater tolerance to salt relative to the wild-type plant.

3. Between November, 1997 and January 2001, my role at Mendel Biotechnology included leading the active screening of a collection of insertion mutagenized plants for the purpose of identifying mutant plant lines with altered expression of targeted transcription factors due to the insertion of foreign DNA within the transcribed sequence or in the proximal regulatory region of genes of interest. Identifying these genes was one of the first steps toward identification of transcription factors and the production of transformed plants.

The Microsoft Excel file "Oligo\_G482.pdf" is a filtered output of sequences derived from our database that lists oligonucleotides used for designing primers and screening for transcription factors in *Arabidopsis*. The first entries, oligonucleotides O211, O212, O884, O2190, O2189, O1205, O2781, O3114, and O3113, correspond to primer sequences for amplifying the G482 DNA sequence, and have database entry dates prior to July 10, 1998.

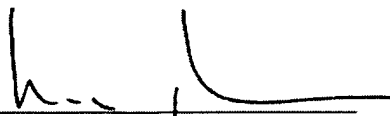
Oligonucleotides O3113 and O3114 also appear in the Excel file "la.xls", which also lists oligonucleotides used for designing primers and screening for transcription factors in *Arabidopsis*. O3113 and O3114 are the fourth and fifth entries on the page shown, and have entry dates of June 23, 1998.

The Excel file "12000 annotated ESTs.xls", which was generated on April 26, 1998, includes an entry for NCBI accession no. N97233, the eleventh entry on the attached page. N97233 corresponds to the mRNA sequence for Lambda-PRL2 *Arabidopsis thaliana* cDNA clone 247D4T7, and encodes part of the G482 sequence, including the n-terminus.

This research was conducted to identify genes of interest in advance of their ectopic expression in transgenic plants.

4. I hereby declare that all statements made herein are true and that they are based on my own knowledge, information and belief. These statements are made with the knowledge that willful false statements are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issued from it.

Date: July 27, 2009



Luc J. Adam, Ph.D.  
Mendel Biotechnology, Inc.

LJA/jml  
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OL ID	GENE	OL SEQUENCE	CHANGE DATE	SUPPLIER
O211	G482	CAGCCTCAAAATCTAAACCCCTTAATGC	12/3/97	Operon
O212	G482	CTCCAAGAGAGCAAGACAGGTTCTTG	12/3/97	Operon
O884	G482	CCAACACCAATGTTGTTCTATCATG	3/2/98	Operon
O2190	G482	CAAGCACACTTGATCTTCTTTACACAGCCTC	4/15/98	Operon
O2189	G482	GGAGACGATTGCTCTGGCTATGACTAC	4/15/98	Operon
O1205	G482	CAGAGAGAGATCCACTTACCAATCT	5/6/98	Operon
O2781	G482	CGCCAAGATCTCTAAAGATGCCAAAGAGAC	5/20/98	Operon
O3114	G482	ACATCACCAACACCAATGTTCTTCTATCAC	6/23/98	Operon
O3113	G482	ACAAGCACACTTGATCTTCTTTACACAGCC	6/23/98	Operon
O4368	G482	ACATCACCAACACCAATGTTCTTCTATCAC	7/28/98	Operon
O4367	G482	CAAGCACACTTGATCTTCTTTACACAGCCTC	7/28/98	Operon
O4366	G482	CTAAAGATGCCAAAGAGACGATGCAGGAG	7/28/98	Operon
O4365	G482	CAACGCCAAGATCTCTAAAGATGCCAAAG	7/28/98	Operon
O5259	G482	GATCTTGGCGTTGGCGGCAAGG	8/27/98	Operon
O5258	G482	GAACCTGGAGACACACTCCTGCATC	8/27/98	Operon
O28570	G482	CTTCAGTCTTCCCACTCAAGTCAACCACCA	5/16/00	MGW
O44190	G482	GGGAAAGCGGCCGCGGAGCAAGACAGGTTCTTACCGATCGCTAACG	9/16/02	MWG
O46013	G482	CATCAGTTTCTTACCACGAGAAC	3/20/03	MWG
O47240	G482	ATACAGAGAGATCCACTTCACCAATC	7/31/03	MWG
O47239	G482	ATACAGCCGACACTTAACAATTACAC	7/31/03	MWG
O47717	G482	AATCTTTGTTAAGTCTTGTCTTACC	9/17/03	MWG
O47704	G482	GTATCACCAACATCATCAGTTTCTTC	9/17/03	MWG
O49391	G482	CGATCTCCTAAACCTCTGCAA	7/9/04	MWG
O49380	G482	TCACCGGAGAAAGCATCTGATAA	7/9/04	MWG
O49820	G482	GGGAAAGCGGCCGCAAGTCTTGTCTACCGAGGCAGCTC	9/7/04	MWG
O49819	G482	GCACGCTCGACATGGGGATCCGACAGGATTCCG	9/7/04	MWG
O50197	G482	GGGAAAGCGGCCGCGAGTCTTGTCTACCGAGGCAGCTCCACCTC	12/1/04	MWG
O51246	G482	GGGAAAGCGGCCGCTTCTGAAAAATTACAAGGAATAAAAAATAAAC	7/27/05	Sigma
O51391	G482	GGGAAAGCGGCCGCTTCTGAAAAATTACAAGGAATAAAAAATAAAC	8/18/05	Sigma
O51596	G482	ATAAGAAATCGGCCGCTTCTGAAAAATTACAAGGAATAAAAAATAAAC	9/13/05	Sigma
O51738	G482	GGGAAAGCGGCCGCTTCTGAAAAATTACAAGGAATAAAAAATAAAC	11/2/05	Operon
O53960	G482	CTGGTGAAGAAACTGATGTTGG	5/7/07	IDT
O53959	G482	CTAGGGAGGCCACAGACTGGTG	5/7/07	IDT
O59896	G482	CCAACACCAATGTTCTTCTATCATG	10/12/07	IDT
O59895	G482	ATACCGCCGACACTTAACAATTACAC	10/12/07	IDT

O3110	G470	62	1 3'-end	1363	CTGGACAAATGAAGGATTTGATGCAGACTTG	3	6/23/1998
O3111	G307	71	1 3'-end	1986	AAACGGTTCGATTCAGTTCGGTTAGTGC	3	6/23/1998
O3112	G307	71	1 3'-end	1930	TCCACTGATCTCAATCTCAAAATTCACCTCGAC	3	6/23/1998
O3113	G482	74	1 3'-end	725	ACAAGCACACTTGATCTTCTTTACACAGCC	3	6/23/1998
O3114	G482	74	1 3'-end	660	ACATCACCAACACCAATGTTCTTATATAC	3	6/23/1998
O3115		89	1 3'-end	1926	TTGTTCAACACAATCTCGAACTCACTTGCTCTC	3	6/23/1998
O3116		89	1 3'-end	1895	TTGTCCTCTCTCCCTCTTCTTCTTCATCG	3	6/23/1998
O3117	G143	223	1 3'-end	1012	CCAAGATATGAATCTTTGTTCTTAAGACGC	3	6/23/1998
O3118	G143	223	1 3'-end	967	AGCTTACGTACATACGTCTCGACAACGGAG	3	6/23/1998
O3119	G136	224	1 3'-end	722	TACACAAGTTGAAGAGGAGGTTGGTCTTGG	3	6/23/1998
O3120	G136	224	1 3'-end	677	TTGCGTTCAAGAAGGTTCAACCGGAATATAG	3	6/23/1998
O3121	G146	234	1 3'-end	860	CTAGAGTATGTTCTTAATCATTAACAACACA	3	6/23/1998
O3122	G146	234	1 3'-end	829	AATTGCAATGAGTCTTGAAGGACCAATACC	3	6/23/1998
O3123	G218	271	1 3'-end	2350	TTTATGTGGACAGGACATTTGGTTATGTTGG	3	6/23/1998
O3124	G218	271	1 3'-end	2230	TGCTACTCTCTAAACCGCTTCTCAGCCAAG	3	6/23/1998
O3125	G221	275	1 3'-end	586	GAGAATAAGTCTCCATCGCTTGATCTTGTTG	3	6/23/1998
O3126	G221	275	1 3'-end	527	GCAGCTTGATCGTTGATCTCTGAGCTAT	3	6/23/1998
O3127	G240	297	1 3'-end	2154	ACCATTAACGTCCAAGAAATCGGGAATATC	3	6/23/1998
O3128	G240	297	1 3'-end	2134	CGGAAATATCAAACTTCATGAGATTACTGC	3	6/23/1998
O3129	G287	355	1 5'-end	86300	GAAATAGCAACTCCAGCTCAAGTCAATTTGG	3	6/23/1998
O3130	G287	355	1 5'-end	86230	TGTTCTCTCATAGAGTGCTTGTCAGCTTGG	3	6/23/1998
O3131	G336	391	1 3'-end	2227	GGCCATACCATCTTCTTCATATCTTGTCGC	3	6/23/1998
O3132	G336	391	1 3'-end	2208	TATCTTGTCGCTGCTTGATTGAACTGAAAG	3	6/23/1998
O3133	G320	392	1 3'-end	102668	CAGCGATGATGGAGATGTTCTTCAGATAG	3	6/23/1998
O3134	G320	392	1 3'-end	102589	TTGTAACATCTTTCACGAAGACGAAGACG	3	6/23/1998
O3135	G339	393	1 3'-end	14148	TGTGTCGGAGAATCCTCTTGACATAACTC	3	6/23/1998
O3136	G339	393	1 3'-end	14076	CTGATTGCGAACAGTCTGCTCCATAATTC	3	6/23/1998
O3137	G362	427	1 3'-end	656	GTACATATAATCTTAATCATATATCTCTC	3	6/23/1998
O3138	G362	427	1 3'-end	632	CTCTCTTTAATTTGTTATGCCGCATCTCCG	3	6/23/1998
O3139	G546	450	1 5'-end	77294	GCAATGACTCGACCGTCAAGATTACTTGAGAC	3	6/23/1998
O3140	G546	450	1 5'-end	77211	ATGGTGGTGATCTTGTCGGCTCTTCTTTG	3	6/23/1998
O3141		452	1 3'-end	3032	TCATCTCTTAGTCGACTTCCTCCATCTTGC	3	6/23/1998
O3142		452	1 3'-end	2990	CAACTCAGGCATATCACCATCTTCTCAAC	3	6/23/1998
O3143		453	1 3'-end	2335	AGACAGACCCACCACACGATATAACAGACC	3	6/23/1998
O3144		453	1 3'-end	2312	ACAGACCTGACACAAACCCCAACCTAGAAG	3	6/23/1998
O3145		458	1 3'-end	1033	TGTTTGCAGAAATTAGTGTCAGTACCAGC	3	6/23/1998
O3146		458	1 3'-end	1003	ATAGCAACATTGCAGATTGTGCGAACAATGC	3	6/23/1998

C-1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC (METHYLENETETRAHYDROFOLATE DEHYDROGENASE / METHENYL TETRAH)			
C25G4.2 [Caenorhabditis elegans]	19 C-2	111L3T7	T42307
C34B7.2 [Caenorhabditis elegans]	21 D-3	114I24T7	T43002
C34D4.4 gene product [Caenorhabditis elegans]	58 E-12	194J15T7	H76431
C-4 STEROL METHYL OXIDASE	74 B-12	224L9T7	N65281
C-4 STEROL METHYL OXIDASE	52 B-1	182J14T7	H37509
C54G4.7 [Caenorhabditis elegans]	83 A-9	241A21T7	N65676
Ca2+-ATPase	92 F-2	249E7T7	W43274
Ca2+-transporting ATPase (EC 3.6.1.38) PMCA3 - rat	105 D-7	E8H6T7	AA042787
CAATT-box DNA binding protein subunit B	83 D-1	G3A12T7	N96705
CAATT-box DNA binding protein subunit B	2 F-3	77G8T7	T45165
cabbage imbibition protein	91 E-5	247D4T7	N97233
cabbage imbibition protein	25 G-12	125L9T7	T44838
cabbage imbibition protein	32 F-3	147O13T7	T75887
cabbage imbibition protein	36 F-7	156M7T7	T88469
cabbage imbibition protein	54 G-1	186E21T7	R89919
cabbage imbibition protein	62 C-2	201L7T7	H77011
cabbage imbibition protein	75 E-8	226L19T7	N65069
cabbage imbibition protein	88 F-4	242F2T7	N96982
cabbage imbibition protein	91 H-3	246I17T7	N97213
cabbage imbibition protein	96 B-8	248A12T7	W43044
cabbage imbibition protein	121 D-6	94L12T7	T21047
cabbage imbibition protein	125 C-9	94L12T7	T21047
cadmium-induced protein	30 D-10	142G24T7	T76090
cadmium-induced protein	122 E-1	120H10T7	T43419
cadmium-induced protein - Arabidopsis thaliana	86 A-12	G8D8T7	N96325
CADMIUM-INDUCED PROTEIN AS30.	20 C-8	114A12T7	T42544
CADMIUM-INDUCED PROTEIN AS30.	27 E-1	132C14T7	T45770
CADMIUM-INDUCED PROTEIN AS30.	27 E-7	131F22T7	T45712
CADMIUM-INDUCED PROTEIN AS30.	38 D-7	160F5T7	T88298
CADMIUM-INDUCED PROTEIN AS30.	53 G-3	185C24T7	H37693
CADMIUM-INDUCED PROTEIN AS30.	54 G-2	186E23T7	R89920
CADMIUM-INDUCED PROTEIN AS30.	76 G-8	227N9T7	N65389
CADMIUM-INDUCED PROTEIN AS30.	77 A-9	230D21T7	N65486
CADMIUM-INDUCED PROTEIN AS30.	85 D-4	241E13T7	N97284
CADMIUM-INDUCED PROTEIN AS30.	100 F-6	E3A6T7	AA042140
CADMIUM-INDUCED PROTEIN AS30.	103 B-4	E8B8T7	AA042303
cadmium-resistance protein	15 E-11	107J19T7	T22571
Caenorhabditis elegans cosmid F56C9 [Caenorhabditis elegans]	115 E-9	250G2T7	W43358
caffeic acid 3-O-methyltransferase	43 C-5	167P12T7	R65224
caffeic acid 3-O-methyltransferase	46 C-2	173I7T7	H36487
CAFFEIC ACID 3-O-METHYLTRANSFERASE (S-ADENOSYLS-L-METHIONINE:CAFFEIC ACID 3-O-METHYLTRANSFERASE) (CO	78 A-6	F5B6T7	N96542
caffeic acid/5-hydroxyferulic acid O-methyltransferase	19 A-9	111G11T7	T42255
caffeoyl-CoA O-methyltransferase	36 A-9	154J19T7	T88356
CAFFEYOYL-COA O-METHYLTRANSFERASE (TRANS-CAFFEYOYL-COA 3-O-METHYLTRANSFERASE) (CCOAMT)	25 D-3	125A9T7	T44276
CAFFEYOYL-COA O-METHYLTRANSFERASE (TRANS-CAFFEYOYL-COA 3-O-METHYLTRANSFERASE) (CCOAMT)	23 A-11	120J2T7	T43508
CAFFEYOYL-COA O-METHYLTRANSFERASE (TRANS-CAFFEYOYL-COA 3-O-METHYLTRANSFERASE) (CCOAMT)	106 G-2	E12B7T7	AA042641
CAFFEYOYL-COA O-METHYLTRANSFERASE (TRANS-CAFFEYOYL-COA 3-O-METHYLTRANSFERASE) (CCOAMT)	113 A-5	132K23T7	R84053